Longitudinal Patterns in Combat Platoon Cohesion

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Presented at the 1989 Leadership Conference of the Center for Army Leadership, Kansas City, MO, 10-13 April.

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Introduction

The purpose of this report is to describe how combat platoon cohesion changes over time. Earlier reports have provided in depth descriptions of measures of platoon cohesion and their apparent strong association with platoon performance on objectively scored field exercises (Siebold & Kelly, 1988a, 1988b). The initial section of this report presents the research methods and measures used as well as the sample of platoons from which data were collected. The results address differences among platoons on the cohesion measures, the general pattern of cohesion over time for both COHORT and non-COHORT platoons, the patterns of cohesion surrogate measures (Combat Will and Combat Confidence), and the special case of platoons with two year first term enlistees. The report ends with some tentative conclusions based on the data and some suggestions for managing platoon cohesion.

Among the primary responsibilites of small unit leaders are to support the larger organization, develop themselves, and develop their subordinate units. The latter, especially, is an ambiguous and complex undertaking. It includes the development of subordinate leaders, building effective relations between unit members and between groups of leaders, and creating a meaningful and motivating environment. While the Army has given leaders training and experience with unit development, it has provided only limited tools to help them. Much of the rationale for the program underlying the research described in this report was to augment the array of tools and information available to small unit leaders to assist them with unit development. Specifically, the information in this report is presented to enable leaders to put the conditions in their own platoons in context.

Methods

Procedure. Questionnaires were administered to all soldiers, including the leaders, of the platoons involved. Administration was done by ARI researchers, usually to one company at a time, typically in either a classroom or a gymnasium setting. The soldiers responded to the questionnaires on a standard mark sense (machine readable) answer sheet. Administration time from start to finish lasted about one hour. The average soldier completed the questionnaire, after instructions, in about one half hour. During the same visit, interview information and ratings on the platoons were obtained from their company commanders and first sergeants. Each administration was conducted in essentially the same manner.

Measures. The base questionnaire used in each administration was the Combat Platoon Cohesion Questionnaire. It was derived from a conceptualization of platoon cohesion as composed of three major types of bonding: between peers, between leaders and their subordinate soldiers, and between all soldiers and their unit. These have been labeled horizontal, vertical, and organizational bonding respectively. Each major type of bonding is considered in turn to be composed of both affective (feeling, emotional) and instrumental (action, task) aspects. Operationalization of this conceptual framework resulted in 11 questionnaire scales which are only moderately intercorrelated. The 11 scale names and subject matter are displayed in Table 1. The scales held up well under factor analysis, except that the three scales dealing directly with leaders (HB-A,L; VB-A; and VB-I) formed only one factor (soldier response set), albeit a very strong factor. Also the scale relationships held up well when (a questionnaire item assessing) platoon morale was controlled for. In short, the 11 measurement scales composing the base Combat Platoon Cohesion Questionnaire are psychometrically sound, as described in detail in Siebold and Kelly, 1988a.

Sample. The sample of platoons from which data were collected were those in two COHORT battalions of light infantry from the same brigade and those in four line companies from the same non-COHORT mechanized infantry battalion at a different post. This was an availability sample within the scope and allocated resources of the research project. Succinctly stated, the younger of the COHORT light infantry battalions was the prime focus. The research approach was to follow the platoons in that battalion in some depth over their approximately 34 month long COHORT life cycle. Data have been collected at the 3, 11, and 19 month periods into their cycle thus far. The older COHORT battalion started its cycle one year earlier than the younger battalion. Since data collection started with the third month of the younger battalion's cycle, the older battalion was picked up at 15, 23, and 31 months in cycle. By patching the data collection points of the two "sister" battalions together, one has an estimate of data for a full cycle. That was done for the analyses presented in this report.

The platoons in the non-COHORT mechanized infantry battalion formed a baseline comparison set. Data were collected on those platoons at two points in time which were 11 months apart. In calendar time, those two points were the same as months 5 and 16 of the younger COHORT battalion's life cycle.

One of the companies in the older COHORT battalion was composed of soldiers on two year enlistments, rather than the usual three year enlistment for COHORT units. This company was activated at the same time as the younger COHORT battalion. Thus it started its cycle with the younger battalion but ended its cycle with the older COHORT battalion. Because this company with two year enlistees started its cycle with the younger battalion, platoons from the company were included with the platoons from the younger battalion in the analyses as Platoon Set A. The

Table 1

Combat Platoon Cohesion Questionnaire Scales

Horizontal Bonding (HB)

HB-Affective (HB-A): (6 items); addresses the extent that first term soldiers in a platoon trust and care about one another.
HB-Affective, Leaders (HB-A,L): (3 items); addresses the extent that leaders in a platoon trust and care about one another.
HB-Instrumental (HB-I): (6 items); addresses how well the first term soldiers work together as a team.

Vertical Bonding (VB)

VB-Affective (VB-A): (6 items); addresses how much the first term soldiers and leaders care about each other.
VB-Instrumental (VB-I): (7 items); addresses the technical expertise and training skills of the leaders in the platoon.

Organizational Bonding (OB)

OB-Affective, First Termer Values (OB-A,FV): (15 items); addresses the importance of key Army values to first term soldiers.
OB-Affective, Leader Values (OB-A,LV): (15 items); addresses the importance of the same values to leaders in the platoon.
OB-Affective, Pride (OB-A,P): (5 items); addresses how proud first term soldiers are to be a platoon member.
OB-Instrumental, Anomie (OB-I,A): (5 items); addresses the extent to which there is a rational environment for action by the platoon members.
OB-Instrumental, Needs (OB-I,N): (6 items); addresses the extent to which first termer basic and social needs are being met.
OB-Instrumental, Goals (OB-I,G): (5 items); addresses the extent to which first term soldier enlistment goals are being met.

platoons from the other companies in the older COHORT battalion were treated together in the analyses as Platoon Set B. The non-COHORT mechanized infantry platoons, of course, formed another separate group for the analyses. To keep the "combat platoon" theme, only the 81mm Mortar, Anti-Tank, and Scout platoons were included from the headquarters companies of the light infantry battalions. For the line companies in both the light infantry and the mechanized infantry, all platoons, including headquarters platoons, were part of their respective sample platoon sets. The total sample of 46 platoons is articulated in Table 2.

Assumptions. The use of the questionnaire and this particular sample puts certain constraints on the interpretation of the results. To measure cohesion by an active method such as a questionnaire runs into the Heisenberg Principle, i.e., the act of measuring platoon cohesion, especially over time, affects the platoon cohesion it attempts to measure. For interpretation, this effect is assumed to be negligible. The size of the sample is small in number and breadth of battalions represented. For interpretation, the sample is assumed representative of typical platoons. The patching together of data points from two sister battalions to form one full COHORT cycle is assumed to provide a valid estimate. Further, the platoon changes in cohesion that occurred over the various data collection times are assumed to be the result of unit internal structure and process rather than the result of changes in local conditions and events outside unit control. Nonetheless, during the 19 month data collection interval some or all of the platoons, for example, experienced changes in leaders and leader emphasis at the division, brigade, battalion, company, and platoon levels. Thus, one must be cautious in interpretation and recognize the limits of the data on which this report is based.

Results

Do Platoons Differ in Cohesion? The data were examined to determine how much platoons differed among themselves on each cohesion scale and at each data collection period. The maximum difference is expressed as the range between the platoon with the highest mean on a scale at a given time period and the platoon with the lowest mean on a scale at the same time period. Those highest and lowest means are displayed in Tables 3 and 4 for the COHORT and non-COHORT platoons respectively. The subsequent range intervals are shown in Tables 5 and 6.

An inspection of the Tables 5 and 6 suggests that not only are there substantial differences between platoons in the various aspects of cohesion, but these differences exist at all points in time for both COHORT and non-COHORT platoons. By considering range intervals of 2.00 scale points or more, one can see that the largest intervals tend to occur on scales measuring the "A" or affective components. The specific cohesion scales dealing with the leadership factor (HB-A,L; VB-A; VB-I) and platoon pride appear to have the greatest range intervals.

Table 2

COHORT and Non-COHORT Platoons in the Research Sample

Light Infantry COHORT Platoons:

Platoon Set A (19 Platoons)

Battalion 1 (first term soldiers arrived at the battalion in fall of 1986):

HHC--3 platoons (Anti-tank, 81mm Mortars, Scouts)
A Company--4 platoons
B Company--4 platoons
C Company--4 platoons

Battalion 2 (B Company first term soldiers were 2 year enlistees who arrived at the battalion in fall of 1986 along with Battalion 1 first term soldiers):

B Company--4 platoons

Platoon Set B (11 Platoons)

Battalion 2 (first term soldiers in A and C Companies arrived at the battalion in fall of 1985; HHC platoons were not under COHORT, but many of their soldiers were):

HHC:--3 platoons (Anti-tank, 81mm Mortars, Scouts)
A Company--4 platoons
C Company--4 platoons

Mechanized Infantry Non-COHORT Platoons:

Battalion 3 (16 Platoons):

A Company--4 platoons
C Company--4 platoons
D Company--4 platoons
AT Company-4 platoons

Table 3

Cohesion Scale Highest and Lowest Platoon Means by Platoon Months in COHORT Unit Cycle

Cohesion Scales	Months in Unit Cycle					
	3	11	15	19	23	31
HB-A	4.71- 3.06	3.93- 2.03	3.61- 2.54	4.39- 2.51	5.23- 2.64	5.25- 2.66
HB-A,L	5.06- 3.52	3.92- 2.12	3.71- 2.33	4.89- 2.56	5.17- 2.62	4.89- 3.24
HB-I	3.24- 2.33	2.85- 1.67	2.67- 2.08	2.97- 1.79	3.48- 1.99	3.04- 2.13
VB-A	5.19- 3.24	4.22- 1.77	3.39- 1.99	4.67- 1.79	5.15- 2.50	4.57- 2.75
VB-I	5.08- 3.14	4.10- 1.63	3.27- 2.06	4.14- 2.31	5.41- 2.35	4.65- 2.29
OB-A,FV	4.63- 3.31	4.10- 2.41	3.97- 3.22	4.28- 2.57	4.31- 3.07	4.56- 3.48
OB-A,LV	5.38- 3.94	4.78- 2.71	4.18- 3.98	4.48- 2.77	4.71- 3.96	5.04- 3.77
OB-A,P	5.09- 3.58	4.02- 1.84	3.53- 2.33	4.54- 2.33	5.30- 2.45	4.98- 3.48
OB-I,A	5.23- 4.33	4.63- 2.84	4.08- 2.75	4.40- 2.84	5.44- 3.12	4.96- 3.62
OB-I,N	3.74- 1.63	2.62- 1.25	2.32- 1.50	2.83- 1.02	3.02- 1.32	2.97- 2.13
OB-I,G	4.24- 2.40	3.00- 1.21	2.60- 1.67	3.13- 1.29	4.46- 1.86	4.00- 2.18
Number of Platoons	18	18	5	19	7	11

Note: All scales were based on 7 points (going from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). Data from Platoon Set A were used for unit cycle months 3, 11, and 19. Data from Platoon Set B were used for months 15, 23, and 31. In each cell, the top number is from the highest scoring platoon; the bottom number is from the lowest scoring platoon.

Table 4

Highest and Lowest Platoon Means for Cohesion Scales by Time Period for 16 Non-COHORT Mechanized Infantry Platoons

Cohesion Scales	Time Period 1	Time Period 2
HB-A	4.33- 2.28	4.39- 2.63
HB-A,L	3.64- 2.13	4.72- 2.89
HB-I	2.89- 1.65	2.87- 1.78
VB-A	4.17- 2.50	4.28- 2.65
VB-I	3.63- 1.95	4.31- 2.61
OB-A,FV	5.20- 2.67	4.30- 2.94
OB-A,LV	4.94- 2.80	4.84- 3.37
OB-A,P	3.53- 1.93	4.77- 2.69
OB-I,A	4.45- 3.36	5.03- 3.42
OB-I,N	3.29- 1.33	3.53- 1.67
OB-I,G	3.60- 1.75	3.63- 1.91

Note: Time 2 was 11 months later than time 1. All cohesion scales were based on 7 points (going from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). In each table cell, the top number is the mean of the highest scoring platoon; the bottom number is the mean of the lowest scoring platoon.

Table 5

Range of Platoon Means for the Cohesion Scales by Platoon Months in COHORT Unit Cycle

Cohesion Scales	Months in Unit Cycle					
	3	11	15	19	23	31
HB-A	1.65	1.90	1.07	1.88	2.59	2.59
HB-A,L	1.54	1.80	1.38	2.33	2.55	1.65
HB-I	.91	1.18	.59	1.18	1.49	.91
VB-A	1.95	2.45	1.40	2.88	2.65	1.82
VB-I	1.94	2.47	1.21	1.83	3.06	2.36
OB-A,FV	1.32	1.69	.75	1.71	1.24	1.08
OB-A,LV	1.44	2.07	.20	1.71	.75	1.27
OB-A,P	1.51	2.18	1.20	2.21	2.85	1.50
OB-I,A	.90	1.79	1.33	1.56	2.32	1.34
OB-I,N	2.11	1.37	.82	1.81	1.70	.84
OB-I,G	1.84	1.79	.93	1.84	2.60	1.82
Number of Platoons	18	18	5	19	7	11

Note: All scales were based on 7 points (going from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). Data from Platoon Set A were used for unit cycle months 3, 11, and 19. Data from Platoon Set B were used for months 15, 23, and 31. In each cell, the number is the difference between the mean of the highest scoring platoon and the mean of the lowest scoring platoon.

Table 6

Range of Platoon Means for Cohesion Scales by Time Period for 16 Non-COHORT Mechanized Infantry Platoons

Cohesion Scales	Time Period 1	2
HB-A	2.05	1.76
HB-A,L	1.51	1.83
HB-I	1.24	1.09
VB-A	1.67	1.63
VB-I	1.68	1.70
OB-A,FV	2.53	1.36
OB-A,LV	2.14	1.47
OB-A,P	1.60	2.08
OB-I,A	1.09	1.61
OB-I,N	1.96	1.86
OB-I,G	1.85	1.72

Note: Time 2 was 11 months later than time 1. All cohesion scales were based on 7 points (going from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). In each table cell, the number is the mean of the highest scoring platoon less the mean of the lowest scoring platoon.

Does The Cohesion in a Given Platoon Change Over Time? While it is clear from the preceding tables that platoons may vary among themselves in their level of cohesion at any given time, it is also crucial to know whether a specific platoon is likely to vary in its level of cohesion over time. The data were analyzed to examine this issue. Simply stated, the answer to the question is yes. While showing the data on every platoon on every scale is beyond the scope of this report, representative results for three scales on platoons from Set A are provided in Table 7.

Looking down the columns, one can see that the swings from one time period to the next were less for the Horizontal Bonding -Affective Scale than for the two scales involving leaders. By examining the rows, one can see that swings in some platoons are less extensive than in other platoons; compare platoons 6 and 11, for example. The changes in platoons within the same company can even be quite different. For example, the Vertical Bonding-Affective Scale means for platoons 16, 17, and 18 all decrease noticeably from month 3 to month 11. Then from month 11 to month 19, the platoon 16 mean continued to decrease substantially (-1.05), the platoon 17 mean increased substantially (+.97), and the platoon 18 mean stayed about the same (-.07). As a net effect, the platoon 16 mean at 19 months was 2.70; the platoon 17 mean was 4.67; and the platoon 18 mean was 3.46. In short, there was great variation in the level of vertical bonding for the platoons in the same company.

Was There An Overall Pattern of Platoon Cohesion? Thus far, the results presented have indicated substantial variation among platoons at any given time and for given specific platoons across time. A remaining key question is whether there is any overall pattern to these differences in platoon cohesion. The data were examined to address this question by computing an overall mean (average of platoon means) for each platoon set for each scale for each time period. The results are displayed in Tables 8 and 9. Standard deviations are included in the cells of each table to put the levels of the means in context.

The COHORT platoons provide the most meaningful data for showing overall patterns because they are organized into a developmental cycle and maintain much greater first term soldier stability than non-COHORT platoons. The COHORT results in Table 8 indicate that there appears to be a shallow U-shaped pattern in cohesion over time. The highest cohesion scale values are at the beginning and end periods of the cycle. The lowest scale values are in the middle periods of the cycle, especially months 11 and 15. Apparently, most aspects of platoon cohesion start off relatively high (in somewhat of a "honeymoon" period), fall off rapidly over the platoon's (and COHORT soldier's) first year, reach bottom, begin to build back up slowly at about a year and one half, and then reach higher levels by the end of the second year. The plateau levels at the end of the second and in the third and final year are not as high as those during the initial honeymoon period but are substantially above the bottom levels at the end of the first year and initial part of the second year.

Table 7

Changes in Specific Platoon Means on Selected Cohesion Scales for 18 COHORT Light Infantry Platoons by Months in Unit Cycle

	HB-A		HB-A.L		VB-A	
Platoon	11	19	11	19	11	19
1	-.96	-.37	-1.78	.26	-1.15	-.37
2	-.91	.87	-1.14	.85	-1.11	.04
3	-1.23	.44	-.92	-.64	-1.37	-1.39
4	-.52	.09	-.96	.85	-1.56	.89
5	-1.46	.48	-1.55	-.10	-1.22	-.09
6	-.23	.45	-.94	-.08	-.60	-.75
7	-1.66	.18	-1.95	-.18	-1.88	-.45
8		.14		.73		-.37
9	-.83	.50	-1.21	.25	-.88	-.71
10	-.90	1.25	-1.40	.79	-1.47	1.34
11	-1.47	.96	-2.37	1.21	-2.25	.86
12	-.87	.42	-1.27	.45	-1.75	.91
13	-.07	-.08	-1.65	.25	-1.63	-.47
14	.23	-.93	-1.04	.48	-1.31	.05
15	-.01	.87	-.71	.35	-1.11	.32
16	-.24	.00	-.30	.11	-.95	-1.05
17	.05	.46	-1.03	.97	-1.22	.97
18	-.11	.10	-.85	.21	-1.24	-.07

Note: Data are from Platoon Set A. Numbers in column "11" show the change in the platoon mean on the scale from cycle month 3 to cycle month 11; numbers in column "19" show the change in the mean from cycle month 11 to cycle month 19. Blank rows in the table separate platoons by company. All cohesion scales shown in the table were based on 7 points, scored from 0 to 6. Minus signs in the table cells indicate a decrease in the platoon mean from the level at the prior time; no minus sign indicates an increase in the mean. Blank cells indicate missing data. There was one platoon from Platoon Set A with no data at month 11; thus that platoon was eliminated from the analysis for this table.

Table 8

Cohesion Scale Overall Means and Standard Deviations at the Platoon Level by Months in COHORT Unit Cycle

Cohesion Scales	Months in Unit Cycle					
	3	11	15	19	23	31
HB-A	3.77 (.49)	3.07 (.56)	3.17 (.41)	3.44 (.56)	3.48 (.86)	3.47 (.68)
HB-A,L	4.34 (.47)	3.10 (.59)	3.25 (.54)	3.53 (.69)	3.70 (.83)	4.03 (.55)
HB-I	2.76 (.25)	2.33 (.35)	2.38 (.27)	2.28 (.31)	2.58 (.47)	2.48 (.27)
VB-A	4.47 (.48)	3.19 (.62)	2.89 (.58)	3.24 (.66)	3.72 (.83)	3.51 (.62)
VB-I	4.55 (.47)	3.19 (.70)	2.87 (.48)	3.14 (.53)	3.60 (1.00)	3.55 (.67)
OB-A,FV	4.19 (.33)	3.36 (.39)	3.55 (.36)	3.37 (.53)	3.68 (.46)	3.85 (.32)
OB-A,LV	4.85 (.40)	4.10 (.53)	4.04 (.08)	3.88 (.46)	4.35 (.31)	4.33 (.43)
OB-A,P	4.36 (.41)	3.24 (.68)	2.95 (.45)	3.35 (.62)	3.68 (.88)	4.03 (.43)
OB-I,A	4.84 (.24)	3.77 (.54)	3.46 (.50)	3.76 (.42)	4.18 (.69)	4.21 (.37)
OB-I,N	2.91 (.49)	1.99 (.44)	1.90 (.34)	1.98 (.50)	2.52 (.58)	2.49 (.31)
OB-I,G	3.56 (.42)	2.22 (.52)	2.23 (.38)	2.41 (.48)	3.03 (.79)	3.11 (.48)
Number of Platoons	18	18	5	19	7	11

Note: All scales were based on 7 points (going from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). Data from Platoon Set A were used for unit cycle months 3, 11, and 19. Data from Platoon Set B were used for unit cycle months 15, 23, and 31. Standard deviations are in parentheses.

Table 9

Cohesion Scale Overall Means and Standard Deviations at the Platoon Level for Non-COHORT Units at Two Time Periods

Cohesion Scales	Time Periods 1	2
HB-A	2.97 (.61	3.58 (.47)
HB-A,L	3.06 (.43)	3.73 (.55)
HB-I	2.29 (.33)	2.39 (.32)
VB-A	3.23 (.45)	3.53 (.45)
VB-I	3.06 (.51)	3.34 (.55)
OB-A,FV	3.65 (.66)	3.47 (.43)
OB-A,LV	3.88 (.55)	3.90 (.49)
OB-A,P	2.88 (.50)	3.57 (.52)
OB-I,A	3.93 (.31)	4.12 (.48)
OB-I,N	2.39 (.59)	2.67 (.57)
OB-I,G	2.43 (.47)	2.75 (.57)

Note: N = the same 16 platoons for both time periods. Time 2 was 11 months later than time 1. All scales were based on 7 points (going from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). Standard deviations are given in parentheses.

An examination of Table 8 reveals that the aspects of cohesion with the littlest change over time, with the shallowest U curves, are those concerning bonding among the first term soldiers (HB-A, HB-I). The differences from the high initial levels to the bottom of the curves are .70 and .48 for HB-A and HB-I, respectively. In contrast, the aspects of cohesion with the most change over time, with the most steep U-shaped curves, are those concerning bonding between the soldiers and their leaders (VB-A, VB-I). For these scales, the differences from the high initial levels to the bottom of the curves are 1.58 and 1.68 for VB-A and VB-I, respectively. The other aspects of cohesion fall in between. For the other scales, the differences from the high initial levels to the bottom of the curves are as follows: HB-A,L=1.24; OB-A,FV=.83; OB-A,LV=.97; OB-A,P=1.41; OB-I,A=1.38; OB-I,N=1.01; OB-I,G=1.34. The reader should recall that these curves were made possible by the patching together of data points from two sister battalions and that for purposes of the analysis the validity of patching them together was assumed.

While the horizontal bonding of the first term soldiers had the shallowest U curves and the vertical bonding between soldiers and their leaders had the steepest U curves, neither had the highest or lowest overall level of the curves. The Organizational Bonding-Instrumental, Needs and Goals Scales had the lowest mean levels throughout the cycle (for the 7 point scales; HB-I was only a 5 point scale). In short, from beginning to end, the soldiers felt the units and the Army were not fully doing their part to meet the soldiers' basic and social needs or to allow the soldiers to attain their enlistment goals.

On the other hand, the soldiers responded throughout that the leaders in their platoon as a group demonstrated support for key Army values. OB-A,LV was the scale with the highest overall curve level (mean values). Similarly, soldiers responded that generally they had rational unit environments and knew what was expected of them. OB-I,A was the scale with the second highest overall curve level throughout the cycle.

For the non-COHORT mechanized infantry platoons, there were only two data points in time. Thus, one can look at changes but not really patterns. However, the scale levels at time 1, as shown in Table 9, are not dissimilar to those at months 11 and 15 in Table 8. Likewise, the scale levels at time 2 are not unlike those at months 23 and 31 for the COHORT platoons. Obviously, there had been some positive increases in certain affective aspects of cohesion (especially HB-A; HB-A,L; and OB-A,P) over the 11 months between times 1 and 2. While the reason these increases occurred is not clear, it should be noted that there were changes of division and battalion commanders in the time period which resulted in major changes in training philosophy and time spent in the field. However, the main points of note are that these non-COHORT platoons as well experienced changes over time in aspects of platoon cohesion and that their levels of cohesion can approach those of COHORT platoons that are beyond the honeymoon cycle period. But, the reader should be cautioned that these findings have only limited utility for comparing COHORT platoons with non-COHORT platoons overall. For example,

some differences will become apparent in the next subsection.

Do Surrogate Measures of Cohesion Show Similar Patterns? Other investigators have used somewhat different measures of cohesion. In particular, combat will (soldier will) and combat confidence have been given much attention (e.g., Marlowe, et al., 1985; Gal, 1986). In order to examine the patterns of these surrogate measures and link them with the cohesion scales, items dealing with these concepts were included at the end of the Combat Platoon Cohesion Questionnaire. The particular items were "How high is the determination or "will" to win in combat in your platoon?" and "Describe the degree of confidence members of this platoon have that it would perform well in combat." The platoon members (soldiers and leaders) responded to the items using a 7 point scale going from extremely high to extremely low. The responses were reversed and scored from 0 (low) to 6 (high).

The highest and lowest platoon means for the different platoon sets and time periods are displayed in Table 10. As with the platoon means on the cohesion scales, there was a wide range in platoon means on the two surrogate items across the time periods for all the different platoon sets, i.e., platoon means differed substantially on each item at each time period.

The overall means also formed U-shaped curves over time for the COHORT platoons. In contrast, the overall means for the non-COHORT platoons stayed essentially unchanged between time 1 and time 2. Further, the non-COHORT levels of Combat Will and Combat Confidence were only comparable to the bottom levels (months 15 and 19) of the COHORT platoons. Of additional note, the soldiers reported higher levels of "will to win" than confidence that the platoon would perform well in combat, although the levels of both items were from moderately high to very high. These overall results for the two surrogate items are shown in Table 11.

Do Platoons With Two Year Enlistees Differ? All four of the platoons in one company from Platoon Set A were composed primarily of first term soldiers who enlisted for two years. The data were examined to determine if these four platoons differed from the other platoons in their level and pattern of cohesion. This was a particular issue because, while the soldiers had to be of high quality in order to enlist for just two years, their training schedule had to be compressed somewhat so that they could fit in with the other units in their battalion which were a year older (Platoon Set B).

The overall means of the four platoons as a group are reported separately in Table 12. These platoons seem to follow the same pattern of the other platoons in Set A in terms of the U-shaped curves but at a distinctly higher level. (In comparing the means in Table 12 with those in Tables 8 and 11, the reader should note that the computation of the means in the latter two tables included the high platoon means from the four platoons with two year enlistees.) While the differences between the four platoons and Platoon Set A, of which they form a part, are not evident at month 3, they are clearly evident at months 11 and 19. The only one of the cohesion scales in which the two year

Table 10

Highest and Lowest Platoon Means for Combat Will and Combat Confidence Items for COHORT and Non-COHORT Platoons Over Time

COHORT Platoons:

	Months in Unit Cycle					
Items	3	11	15	19	23	31
Will	5.59- 3.69	5.18- 3.12	4.46- 3.22	5.36- 2.83	5.60- 3.92	5.50- 4.08
Confi- dence	5.31- 3.00	4.65- 1.88	4.43- 3.29	4.82- 2.00	5.00- 3.23	5.00- 3.55

Non-COHORT Platoons:

	Time Period	
Items	1	2
Will	4.75- 3.00	5.57- 3.13
Confidence	4.00- 2.67	5.29- 2.63

Note: For COHORT units, data from Platoon Set A were used for unit cycle months 3, 11, and 19; data from Platoon Set B were used for months 15, 23, and 31. For non-COHORT units, time 2 was 11 months later than time 1. The combat will item was "How high is the determination or "will" to win in combat in your platoon?" The combat confidence item was "Describe the degree of confidence members of this platoon have that it would perform well in combat." Both items were responded to on a 7 point scale, scored from 0 to 6, with 6 being the high end of the scale. In each table cell, the top number is the mean of the highest scoring platoon; the bottom number is the mean of the lowest scoring platoon.

Table 11

Combat Will and Combat Confidence Item Overall Platoon Means for COHORT and Non-COHORT Platoons Over Time

COHORT Platoons:

	Months in Unit Cycle					
Items	3	11	15	19	23	31
Confidence	4.95 (.42)	4.19 (.65)	3.85 (.48)	4.10 (.67)	4.56 (.69)	4.76 (.41)
	4.44 (.52)	3.68 (.82)	3.80 (.44)	3.57 (.61)	4.02 (.56)	4.35 (.47)

Non-COHORT Platoons:

	Time Period	
Items	1	2
	3.80 (.48)	4.02 (.66)
Confidence	3.50 (.44)	3.53 (.70)

Note: Standard deviations are given in parentheses. For COHORT units, data from Platoon Set A were used for unit cycle months 3, 11, and 19; data from Platoon Set B were used for unit cycle months 15, 23, and 31. For each month period, the platoon n = month 3, 18 platoons; month 11, 18 platoons; month 15, 5 platoons; month 19, 19 platoons; month 23, 7 platoons; month 31, 11 platoons. For non-COHORT units, platoon n = 16 for both time periods. The combat will item was "How high is the determination or "will" to win in combat in your platoon?" The combat confidence item was "Describe the degree of confidence members of this platoon have that it would perform well in combat." Both items were responded to on a 7 point scale, scored from 0 to 6, with 6 being the high end of the scale.

Table 12

Cohesion Scale and Will and Confidence Item Overall Means for Platoons with Two-Year Enlistees by Months in COHORT Unit Cycle

	Months in Unit Cycle		
Cohesion Scales	3	11	19
HB-A	3.89	3.71	3.95
HB-A,L	4.36	3.84	
HB-I	2.87	2.60	2.37
VB-A	4.50	3.66	3.79
VB-I	4.36	3.77	3.30
OB-A,FV	4.27	3.42	3.24
OB-A,LV	5.06	4.58	4.02
OB-A,P	4.34	3.78	3.63
OB-I,A	5.00	4.33	
OB-I,N	2.38	2.54	2.51
OB-I,G	3.41	2.77	2.85
Items			
Will	4.99	4.61	4.50
Confidence	4.52	4.35	3.66

Note: N = 4 platoons at months 3 and 19 and 3 platoons at month 11. The 4 platoons were from the same company. All cohesion scales were based on 7 points (scored from 0 as low to 6 as high), except HB-I which was based on 5 points (from 0 to 4). The will item, scored from 0 to 6, was "How high is the determination or "will" to win in combat in your platoon?" The confidence item, also scored from 0 to 6, was "Describe the degree of confidence members of this platoon have that it would perform well in combat."

enlistee platoons are not at a higher level than Platoon Set A as a whole is that of OB-A,FV, i.e., the values of the soldiers in the four platoons were reported as the same or slightly lower than those in the other platoons in Set A. Because the cohesion scale levels are so high in the four platoons with the two year enlistees and the mean decreases are so much less relative to the other platoons, their (partial) U-shaped curves are much flatter. Of special interest is the relative decrease in the mean of the combat confidence item at month 19 such that it is close to the mean of Platoon Set A as a whole, shown in Table 11. That may be the outcome of the experience the four platoons had participating in training at the Joint Readiness Training Center where their skills were thoroughly put to the "test" of operating against an opposing force, i.e., the assessment of platoon performance was more grounded in reality. In any case, the platoons with the two year enlistees consistently reported higher levels of cohesion than did the rest of the platoons in the sample and from the author's knowledge did perform well above average in the field.

Discussion and Conclusions

Review. The reader is again cautioned that the interpretations and conclusions herein are based on the assumptions explicated earlier in this report. Nonetheless, the findings presented are both useful and interesting. That platoons in any given set vary in cohesion at any given time and that any given platoon may vary in cohesion across time are important to establish. These findings imply for research that the platoon is a useful level of analysis; there is substantial variation, but there are not wild fluctuations. These findings imply for unit leaders that platoon cohesion is a factor that can and should be actively managed and measured periodically. The finding that there may be U-shaped curves in cohesion permits leaders of COHORT units to hold on to their optimism in the nadir following the honeymoon part of the cycle as well as generally put the level of cohesion in their platoons in context.

The finding that the affective (feeling, emotional) side of cohesion and components dealing with platoon leaders are the most variable suggests that these should be given special attention in monitoring and improving platoon cohesion. The finding that the lowest mean levels concerned soldier basic and social needs and goal aspirations suggests continued organizational attention be given to improving these areas and soldier perceptions of them. On the other hand, the relatively high mean levels of the aspects of cohesion dealing with leader values (OB-A,LV) and the unit environment (OB-I,A) suggests that these are areas of strength that unit leaders can build on, perhaps to pull up or stabilize other aspects of cohesion.

The finding that there is more variation in cohesion within like platoon sets than between COHORT and non-COHORT platoons suggests that the focus of improving platoon cohesion can rest on improving cohesion directly rather than on personnel assignment systems. There is room for improvement under both COHORT and non-COHORT systems. (The reader is again reminded that the

analyses in this report do not address the advantages or the fulfillment of the COHORT (COHesion, Operational Readiness, and Training) system.) However, the findings do suggest that the personnel system may be able to augment recruiting by bringing in high quality two year enlistees. Platoons filled with the latter appeared to develop and maintain relatively high levels of cohesion while training under compressed schedules.

Causation. The analyses presented in this report describe the patterns of cohesion across time. The underlying data do not support causal analyses. Neverless, some discussion of causation is appropriate. The U-shaped patterns of overall means on the cohesion scales are congruent with patterns found in earlier research on small group process. For example, the U-shaped curve can be considered an extended version of the forming, storming, norming, performing process. This suggests that the curve is caused at least in part by normal small group processes. The curve is also congruent with research on organizational socialization. For example, a not dissimilar pattern, based on cross-sectional data, was found in the Army Values Survey (Siebold, 1986). This suggests that the U-shaped curve is caused at least in part by normal organizational socialization processes. A corollary of socialization theory is that there is a self-selection process that goes on over time, i.e., individuals who feel compatible with the organization and/or who are rewarded by it stay in the organization and adopt its culture and approach, at least nominally. This suggests that the U-shaped curve may be caused by simple self-selection processes, that those who feel or experience more cohesion stay in the unit. Over the last two years of a platoon cycle, the higher mean values may increase simply because more and more of those who experience lower cohesion leave. An examination of this issue, of course, would require one to keep close track on individual respondents over time, which goes beyond the data of this report.

Nonetheless, there are other causation questions raised by the findings of this report beside those pertaining to the shape of the overall curves. For example, what causes the curves on the leader scales to be steeper than those for the other scales? What does this imply for the causal role of leaders in platoon cohesion dynamics? What causes some scales to "bottom out" in the curve earlier than other scales? For example, in Table 8 the lowest mean for HB-A,L is at 11 months while the lowest mean for OB-A,LV is at 19 months. In short, there are many questions of causation for which there are as yet no sufficient answers.

Yet there are some causal influences which were found through other research and methods. Vertical bonding increases with positive, quality leadership. Vertical bonding decreases to the extent that leaders are primarily interested in their own careers or to the extent that leaders do not get along among themselves. Horizontal bonding increases when soldiers are required to work together in the field to get the job done. The bonding decreases when soldiers get tired of always working with the same people over long periods of time, get jealous over promotions, or see "bad apples" or "slugs" get rewarded for

nothing. Organizational bonding increases when soldiers get needed support or compensatory time off. Organizational bonding decreases when soldiers spend too much time in the field or perceive themselves to be slighted by the system. Imminent hostilities increase cohesion and values (Siebold, 1986); extensive garrison time and work details decrease cohesion and support for values. Put briefly, while there is much to be learned about cohesion, there is enough known to allow leaders to actively manage the cohesion in their platoons.

How Can Leaders Build Cohesion? As noted in the introductory section, one of the primary responsibilities of leaders is to develop their units. This includes that of actively building and maintaining cohesion. Much of what needs to be done leaders already do. These actions consist of such things as creating unit slogans, limiting intra-unit competition while promoting cooperative activities and tasks, keeping high standards, recognizing good performance, developing subordinates, opening communication channels, administering needed discipline, and acting as a positive role model. What is typically missing from these actions is an active monitoring and assessment of platoon conditions. Other activities seem to take precedence, have a higher priority. And anyway, the leader has a gut feel for what is going on in a platoon.

Unfortunately, small unit leaders do not always have a good handle on platoon conditions (Siebold, 1987). Company commanders, first sergeants, platoon leaders, and platoon sergeants all have their gut feel. However, data indicate that they not only may hold quite different assessments of platoon conditions among themselves but may perceive conditions to be quite different than the soldiers perceive them to be. One way to overcome these different perceptions is to increase talking with the other leaders and the troops about conditions, and this helps. Another way, using a different media, is to administer a brief questionnaire such as the Platoon Cohesion Index (PCI) (Siebold and Kelly, 1988b) to platoon members. This validated, although pilot questionnaire consists of 20 key questions and an open ended blank page; it takes about 5 minutes to complete. The value of the short questionnaire is that it focuses the issues down to certain key questions to which everyone in the platoon can reply. Based on their responses, one can easily compute a platoon cohesion profile on the aspects presented earlier in this report. That profile can be kept as a track record against which the leaders can compare profiles obtained six months or a year later. The blank page portion of the PCI allows soldiers to explain their answers more fully or raise other issues of concern to them. The direct and organized feedback from the questionnaire can be invaluable. In short, the data presented in this report indicate that platoons can and do change in their level of the various aspects of cohesion. In what direction they change may well depend on how actively the leaders manage the process.

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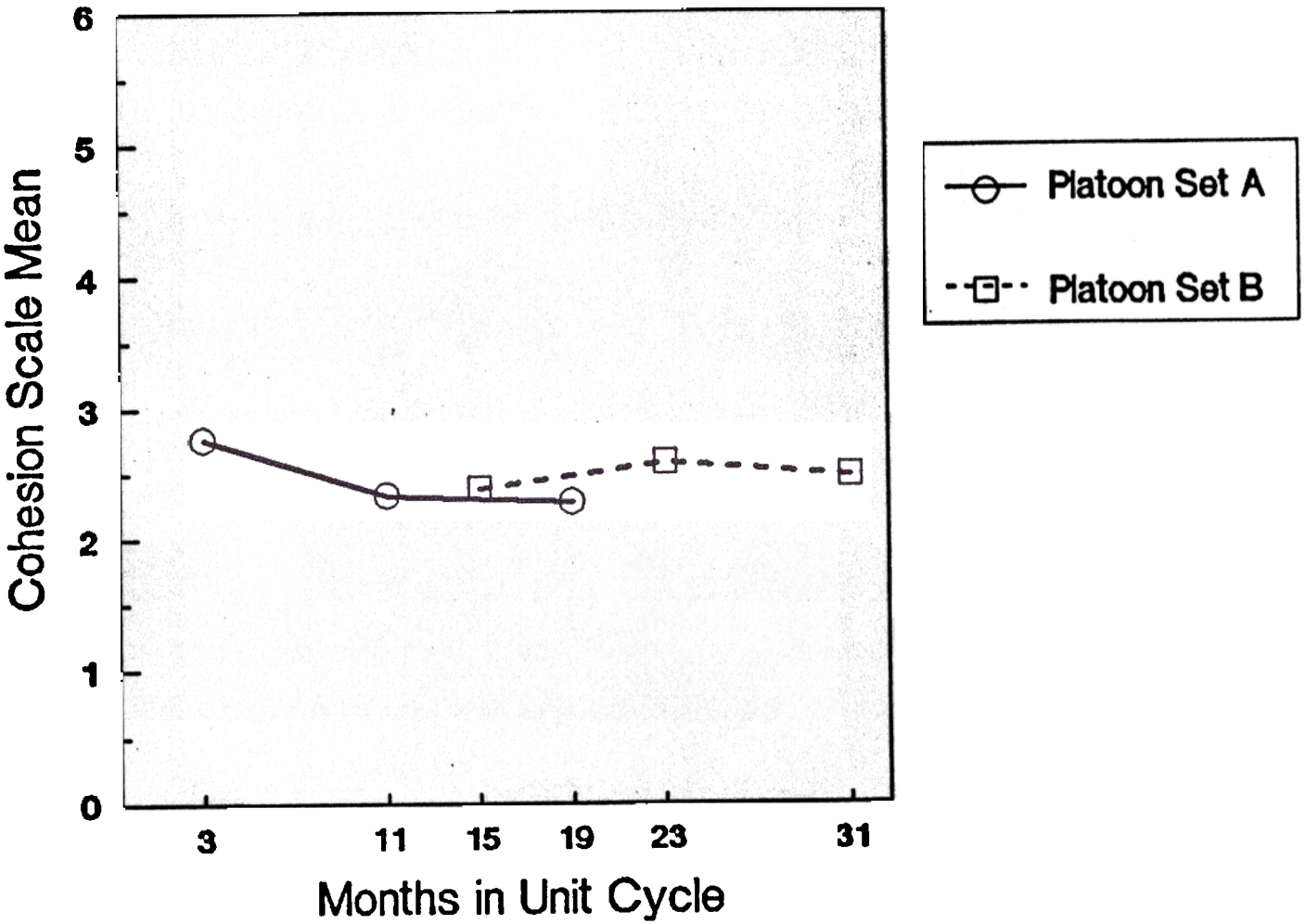
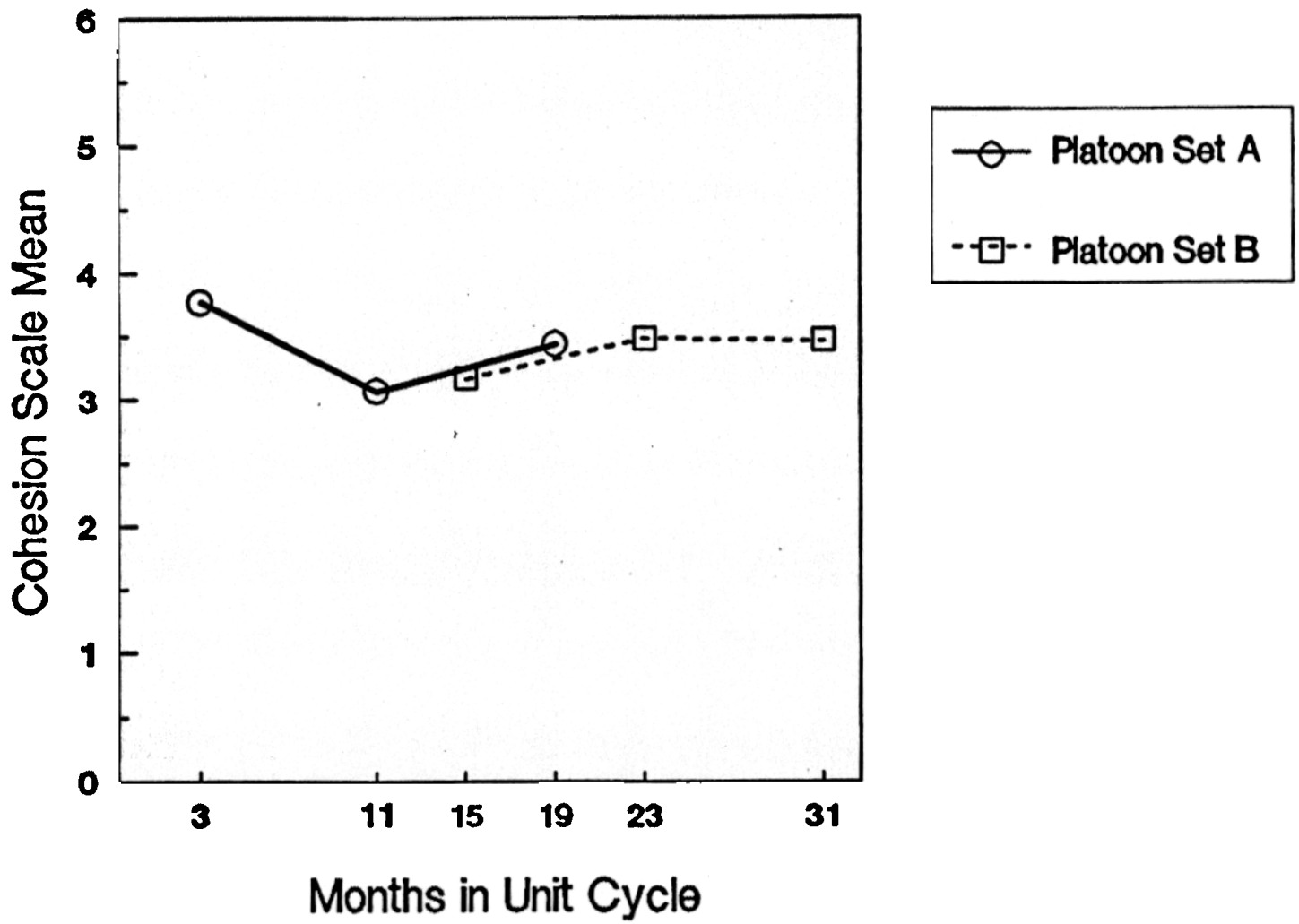
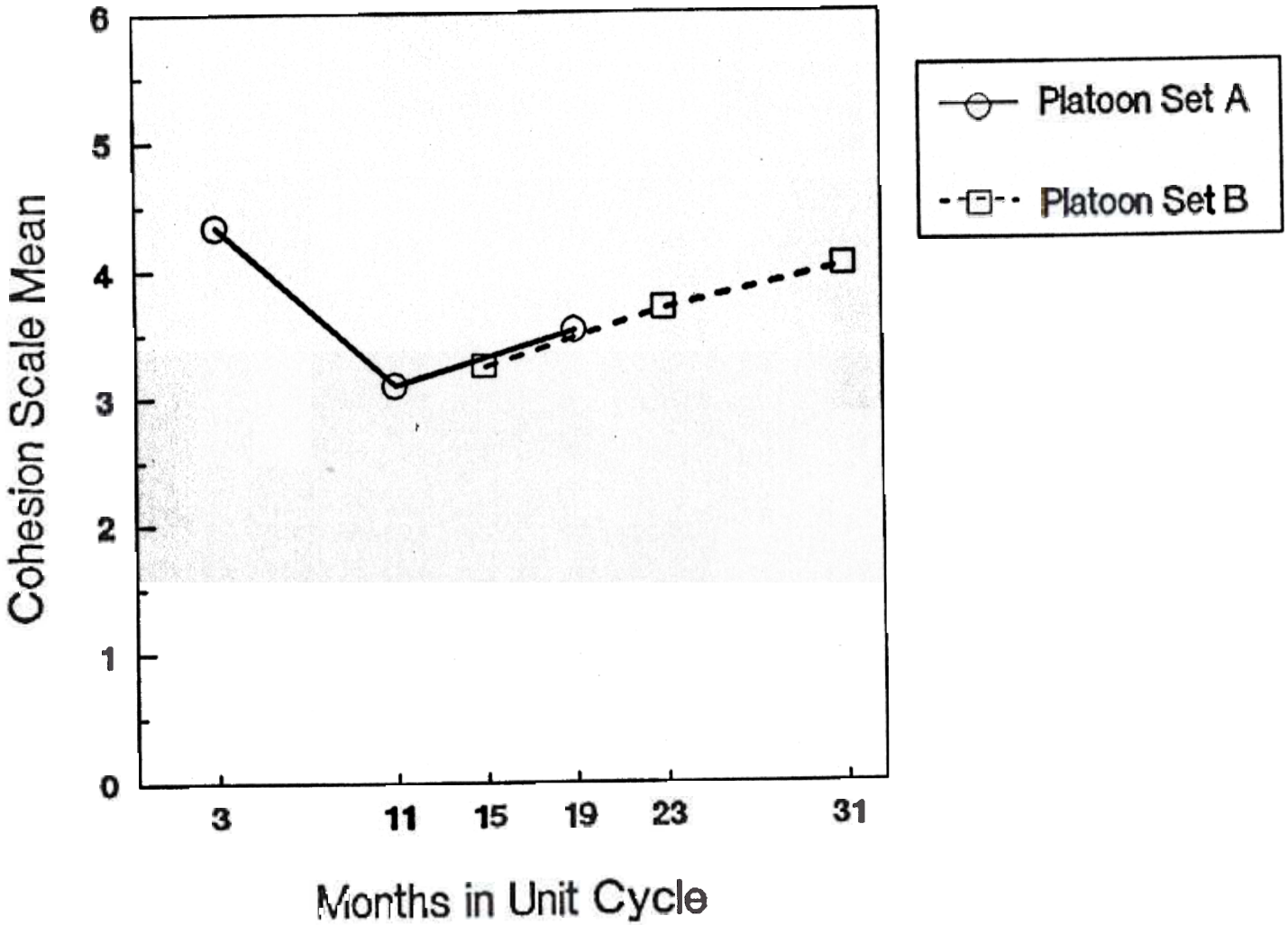
Horizontal Bonding – Instrumental
Overall Platoon Means Over Time

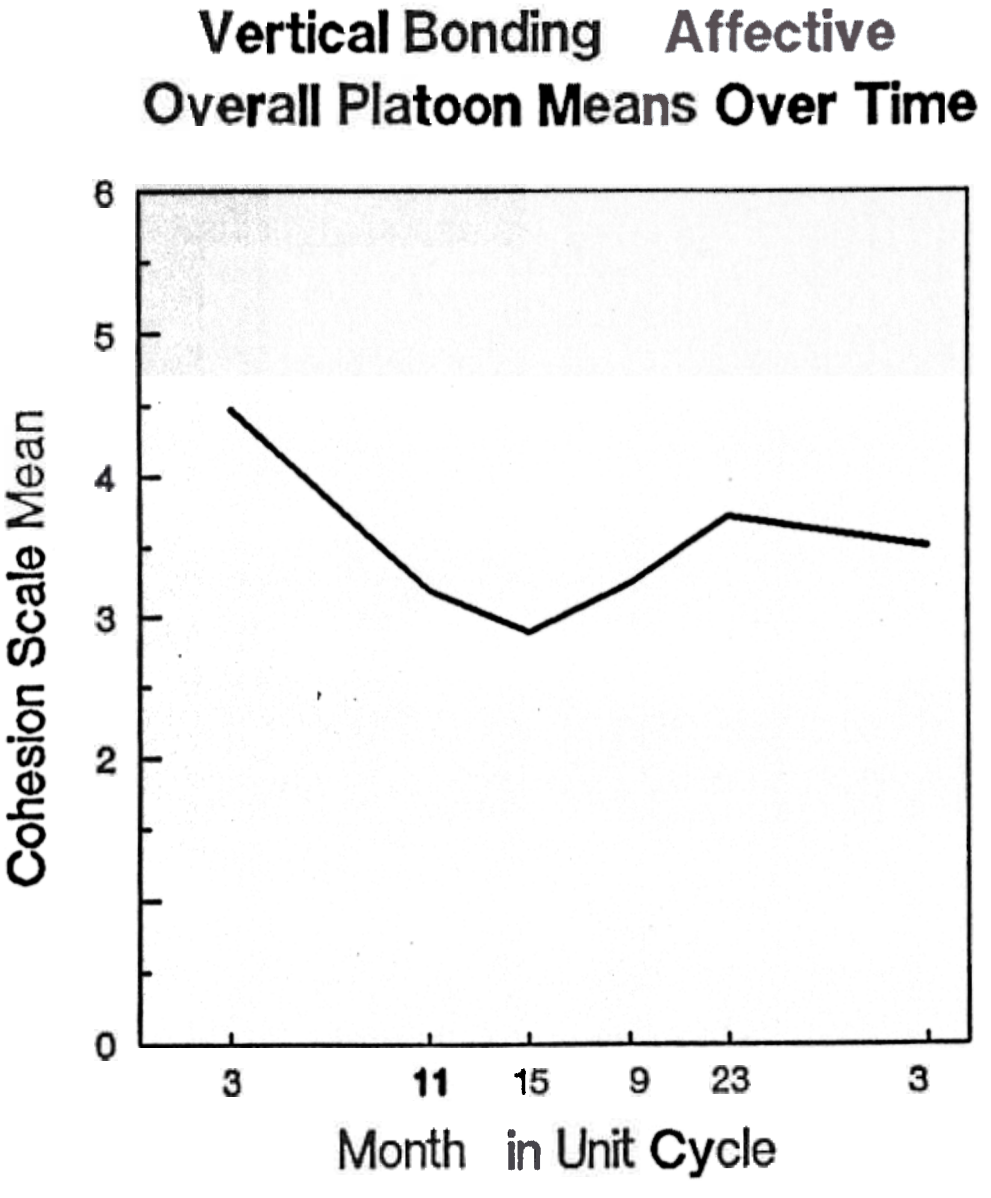


Horizontal Bonding – Affective
Overall Platoon Means Over Time



Horizontal Bonding – Affective Leaders
Overall Platoon Means Over Time




Vertical Bonding Affective
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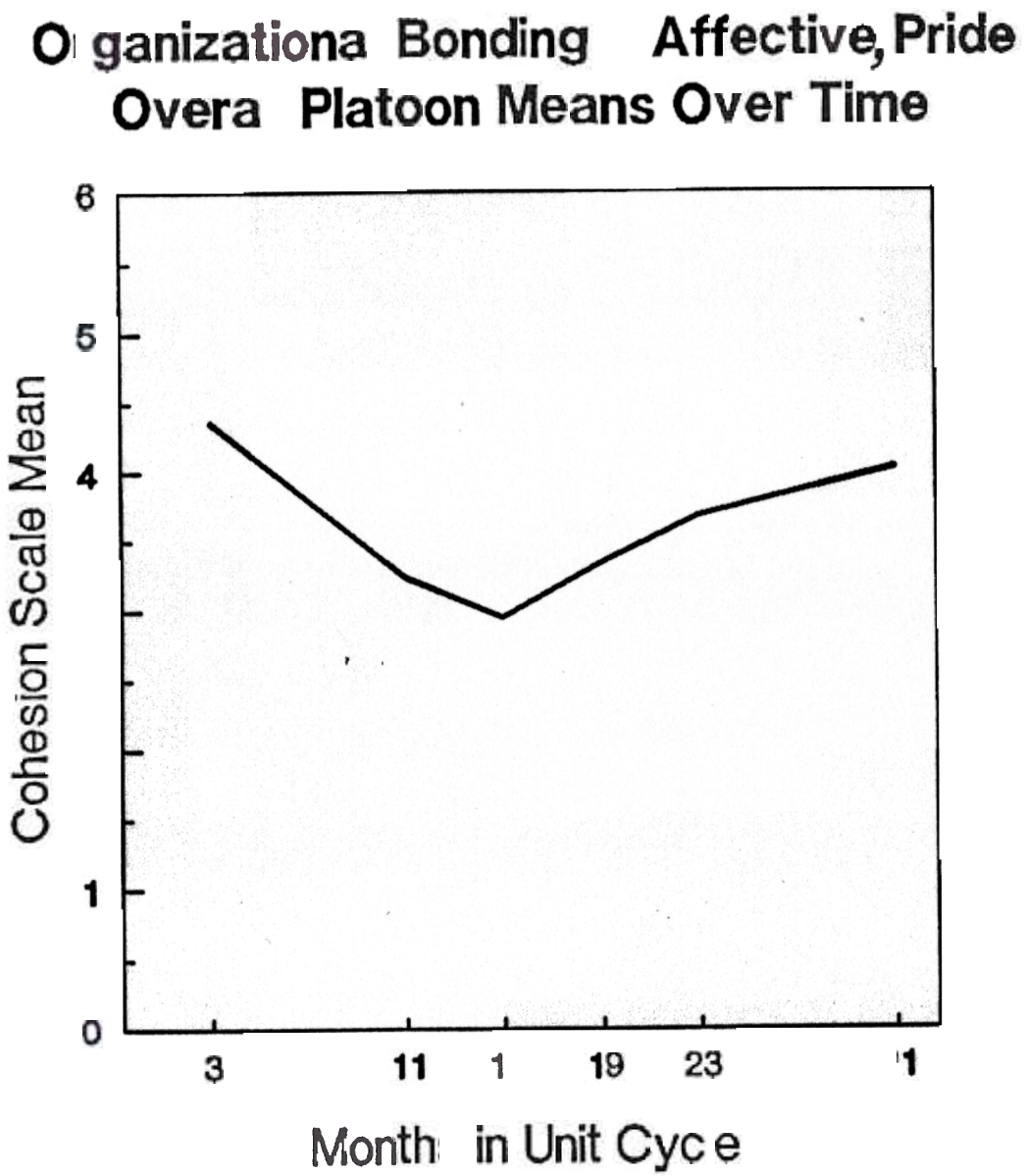
Month in Unit Cycle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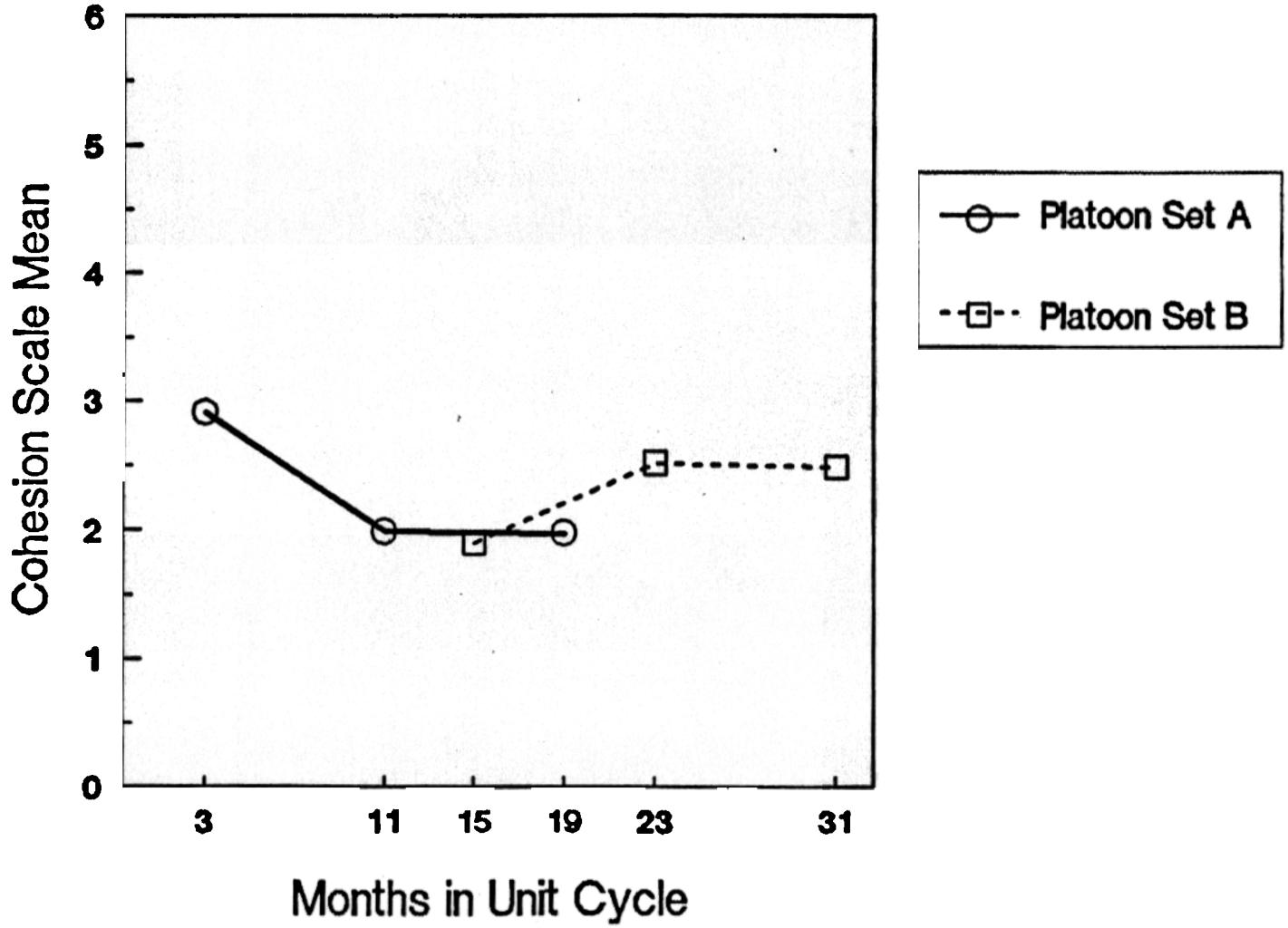

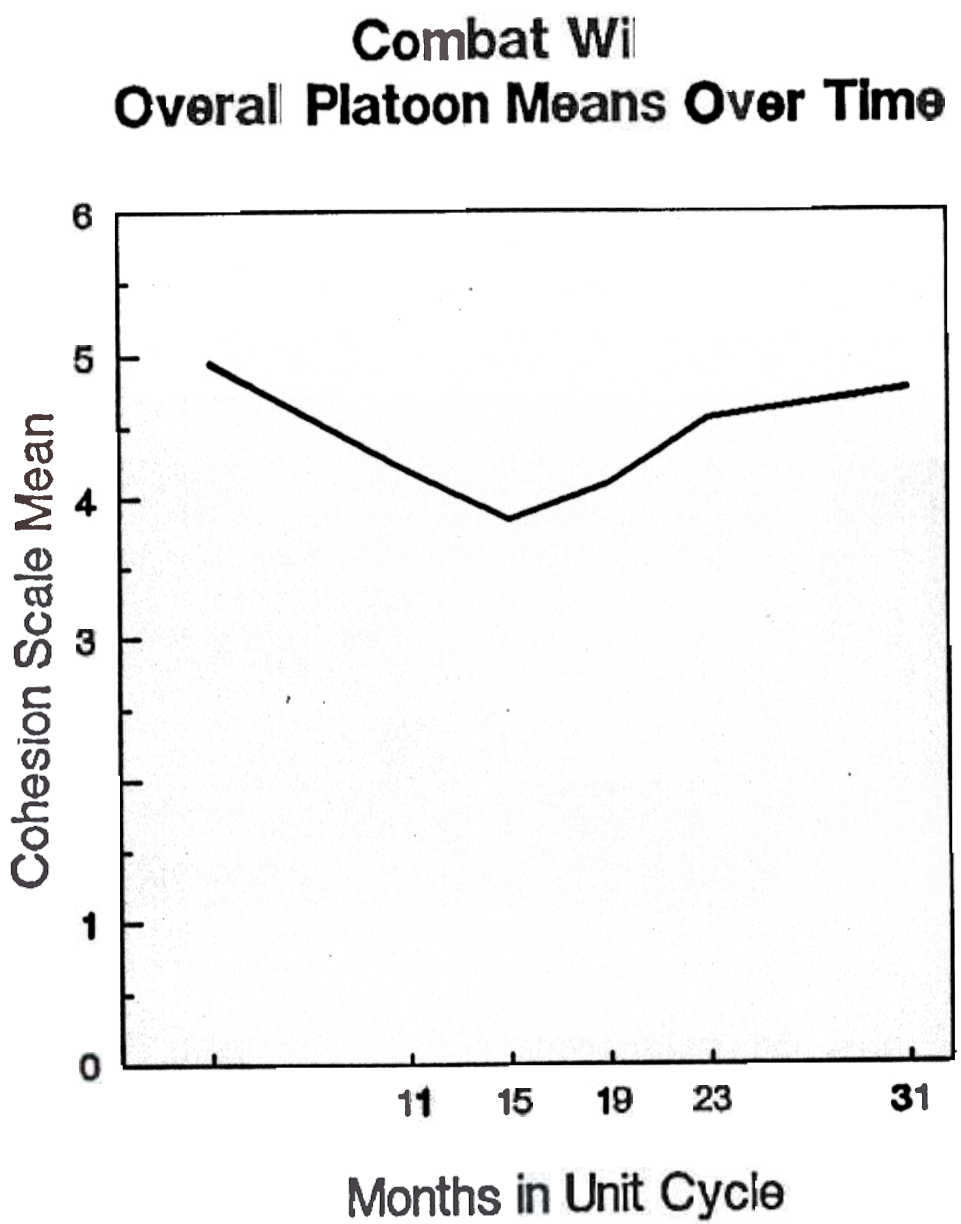
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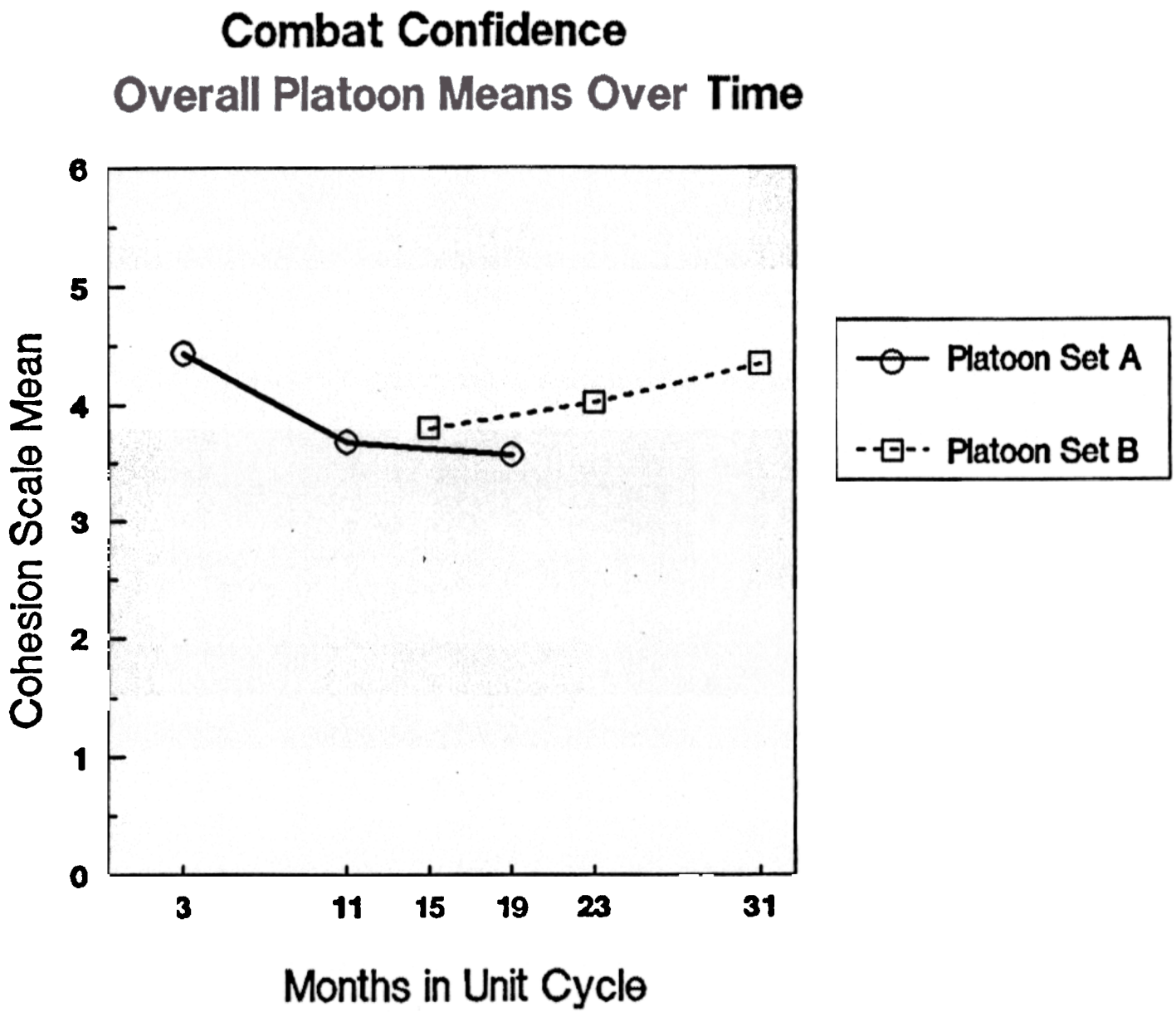
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Months in Unit Cycle
Platoon Set A
Platoon Set B